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Secondary School Students' Level of Acquisition of Geographical Skills in Social Studies Course*

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Abstract

This study was conducted to determine whether the level of secondary school students' acquisition of geographical skills in the Social Studies course differs according to the student's gender, pre-school education, income level, mother's, and father's education level, whether the family is a member of an institution/organization related to the environment, and whether there is a material related to geography at home. This research was designed according to the relational survey model, which is one of the quantitative approaches. The geographical skill level measurement tool developed by the researcher was applied to 352 students selected by convenience sampling from 7th grade students in two secondary schools in Sultanbeyli district of İstanbul province. According to the findings, the level of acquisition of geographical skills of secondary school students was determined as 44.7. It was determined that the level of acquisition of geographical skills of students who received pre-school education was higher. There was a positive relationship between the level of parental education and the level of acquisition of geographical skills. It was determined that the fact that one of the family members was a member of an institution and organization related to the environment made a significant difference on the level of acquisition of geographical skills. In addition, it was determined that the level of material use had a significant difference on the level of acquisition of geographical skills. The level of students' acquisition of geographical skills in the Social Studies course is below average (44.7%), and to increase student success in this subject, families can be ensured to give importance to pre-school education. It is also recommended to support the use of geography-related materials in students' homes.

Keywords: Geographical Skills, Secondary school students, Social Studies Education

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After the education system started to implement skill-based curricula since 2005, it was aimed to make students active in the lessons and to provide them with various general and specific skills. Thus, one of the main objectives of the curricula has become to provide students with skills by using the content of the acquisition (Artvinli, 2009; Artvinli, Kaya, 2010). The fact that the education system is based on gaining skills at an early age and creating skill-oriented content can help students to create a good foundation for challenging skills in life at a later age. In geography education in Turkey, the course in which this subject is taught at an early age is the Social Studies course. Therefore, a good geography education provided in a skill-oriented manner within the Social Studies course can enable individuals to approach the problems arising from human-space interaction more rationally in the future. As a matter of fact, most of the activities that people carry out on earth are closely related to geography (Ceylan & Çoban, 2021). Global problems, state management, economic activities, interstate diplomacy, environment-human interactions are closely related to the science of geography. Geography is a science that examines the interaction of people with nature in the context of space and time, considering the principles of cause and effect, comparison, and distribution (Değirmenci & İlter, 2013; Karakaş-Özür, 2021).

It is possible for people to make sense of the world, gain a global perspective, prevent ecological problems, and recognize the environment in which individuals live through geography education. With geography, individuals can get to know the world more closely and make sense of it. In addition to all these, some values that are desired to be gained through the Social Studies course can also be gained through geography (Karasu-Avcı, 2016).

Geography education starts with the preschool period. In primary schools, geography is taught in the life science course, while geography education is given in the Social Studies course from secondary school onwards. Geography education, which has an important place in the Social Studies curriculum, has become more important with the regulation made in 2018. With the renewed curriculum, it is seen that the number of geographical skills and outcomes related to geography has increased (Çiftçi & Akça, 2019). Despite the increase in the number of objectives, most of the geography objectives in the Social Studies curriculum are at the 6th grade level. According to Erol's (2014) study, the 5th and 7th grade achievements are not sufficient for geography literacy. Students' low level of interest in geography and the fact that students do not feel the need to learn geography can be shown among the reasons for low achievement in geography (Akınoğlu and Bakır 2003). Students' lack of knowledge of learning strategies makes it difficult for them to learn geography. It is known that students cannot understand abstract concepts related to geography, cannot memorize place names, confuse regions, and have difficulty in drawing maps and sketches (Akınoğlu & Bakır, 2003).

Since the Social Studies course is prepared with a thematic approach, it has a spiral structure that includes different disciplines. The content of the Social Studies course was created with the contribution of many disciplines (Ablak, Ergün, & Yeşiltaş, 2020). Geography is one of these disciplines. Geography is a field that enables us to make sense of the environment we are in according to certain principles, and we have the opportunity to compare human and physical characteristics. Geography education, which starts with pre-school in the education system and increases its impact at primary and secondary school level, has taken its place as a pivot course within the scope of Social Studies course. Since the Social Studies course is a course in which secondary school students receive basic education on

geography, it is also very important for high school geography courses. In the revised taxonomy, the number of categories in the cognitive process dimension remained the same but significant changes were made (Krathwohl, 2002). With the changes, 3 categories were renamed and the order of 2 categories was changed. Knowledge was renamed as recall, while comprehension was organized as understanding (Tutkun, Okay 2012). While the application step remained with the same name, analysis was renamed as analyzing and synthesis as creating. Evaluation and creation were replaced with evaluation, so that the creation step replaced the evaluation step as the highest step. The 6 steps of the cognitive process dimension of the taxonomy renewed by Anderson and Krathwohl are as follows: Remembering, Understanding, Applying, Analyzing, Analyzing, Evaluating, Creating.

Skill Education in Social Studies Curriculum

With the constructivist education approach, skills training has an important place in curricula. Social studies course includes many skills due to its structure (Kaçar & Bulut, 2020). Students need to master some skills to reach the geographical gains in the social studies course. Eight of the 27 skills expected to be gained in the Social Studies course are related to geography (Ministry of National Education (MoNE), 2018). These skills are environmental literacy, perception of change and continuity, observation, map literacy, location analysis, perception of space, drawing and interpreting tables, graphs and diagrams, and perception of time and chronology (MoNE, 2018). The acquisition of these skills by students plays an important role in making the achievements and concepts related to geography more understandable. Good acquisition of geographical skills in the Social Studies course by students will form a basis for students to acquire other geographical skills in the geography course more easily when they move to high school. The acquisition of geographical skills is extremely important for students to recognize their immediate and distant environment and to comprehend human and physical geography (Dikmenli, 2020).

Skill is the ability of individuals to do a desired job or behavior according to their ability and learning status (Turkish Language Association, (TLA), 2022). Skill includes not only knowledge, but also performance as well as knowledge (Aksoy & Akbaba, 2019; Namal, 2019). From the perspective of educational activities, skill is a set of activities that students are expected to acquire and that will enable them to transfer this knowledge to daily life. The structuring of knowledge by students is possible with skills training. A student who can construct knowledge will be able to take an active role in producing solutions to the problems he/she will face throughout his/her life.

Curricula, which are prepared for the acquisition of skills at educational levels, can be defined as a process that organizes the subjects and activities to be covered in a course and covers all the activities expected to be gained by the individual inside or outside the school (Kaçar & Bulut, 2020). The aim of adapting to the conditions of the age required the updating of curricula. The constructivist learning approach, which has been influential in curricula since 2005, has been an important step for students to internalize knowledge (Aksoy & Akbaba, 2019; Kaçar & Bulut, 2020). An individual who internalizes knowledge can use these skills in social life and provide lifelong learning. The constructivist learning approach adopted in curricula has changed the roles and tasks assigned to teachers and students. While the student is expected to discover the information himself/herself, the teacher's role has been to guide the student. With constructivism, students ceased to be passive in the education process and

became actively involved in the learning-teaching process (Artvinli, 2010; Aslan & Bulut, 2021). With this new understanding, it has become more possible for students to gain high-level thinking skills by moving beyond memorizing and remembering information. With this understanding that learning to learn is important, modern methods and techniques have started to be used both inside and outside the classroom, and materials that support learning have been included.

In addition to traditional measurement tools, there are also alternative measurement tools for the evaluation of educational activities in curricula (Yılmaz & Gazel, 2017). With the constructivism-based program, product evaluation has been replaced by process evaluation. Until the last quarter of the 20th century, learning involved memorizing information and retrieving it from memory when necessary (Aslan & Bulut, 2021). With the information society, what is expected from the learning activity has undergone a radical change. While in the educational approach applied in the past periods, it was considered sufficient to learn only knowledge, the 21st century conditions require the use of this knowledge in addition to learning only knowledge (Aksoy & Akbaba, 2019). Some skills classified as 21st century skills have manifested themselves in education programs since 2016. Curricula, which include concept, skill and value education as well as achievements, have been considered among the basic elements of the curriculum since 2005.

Eight of the 27 skills that students are expected to acquire in 2018 SBSP are related to geography. These geographical skills are expected to be acquired at a certain level by the end of the seventh grade. This is because there is no course or unit in the eighth grade that includes geographical outcomes or skills. However, there is no research in the literature on the level of students' acquisition of these skills and to what extent they have reached a level that will constitute the basis for the high school geography course. For these reasons, this study aims to determine the level of secondary school students' acquisition of geographical skills in the Social Studies course. Based on this purpose, the problem statement of the research: What is the level of secondary school students' acquisition of geographical skills in the Social Studies Curriculum? Answers to the following questions were sought in the sub-problems of the research:

- What is the level of secondary school students' acquisition of geographical skills in the Social Studies course?
- Does the level of secondary school students' acquisition of geographical skills in the Social Studies course differ according to the following variables?
  a. Gender
  b. Preschool education status
  c. Family income level
  d. Mother's education level
  e. Father's education level
  f. Membership status of a family member to an institution or organization related to the environment.
  g. Whether the student has tools and equipment related to geography such as atlases, maps, globes at home.

Methodology

Research Design

Since the aim of the study is to determine whether the level of secondary school students' acquisition of geographical skills in the Social Studies course differs according to various variables, this research was designed according to the relational survey model, which is one of the quantitative research methods. The correlational survey model is generally used to determine the change in the situation between two or more than two variables in relation to the correlation coefficient (Fraenkel, Wallen, & Hyun, 2012; Karasar, 2012).

In the relational survey model, the relationship between the characteristics of a specific sample group is examined without any intervention (Büyüköztürk, Çakmak-Kılıç, Akgün, Karadeniz, & Demirel, 2013). In this study, the relationship between the level of acquisition of geographical skills of secondary school students according to the status of receiving pre-school education, gender, income level of the family and education level of the mother and father, being a member of an institution/organization related to the environment, and having materials related to geography in the student's home was examined.

Universe and Sapmle

In this population, which is called the restricted population or the study population, 7th grade students at secondary schools in Sultanbeyli district of İstanbul province in the spring semester of 2022-2023 academic year constituted the restricted population. The schools in the restricted population are shown in Table 1.

Table 1

Secondary Schools in Sultanbeyli District of İstanbul (Sultanbeyli.meb.gov.tr)

Row	Secondary Schools in the District
1	Ahmet Yener Secondary School
2	Akşemsettin Secondary School
3	Atatürk Secondary School
4	Aydos Secondary School
5	Battalgazi Secondary School
6	Cumhuriyet Secondary School
7	Erol Yüksel Secondary School
8	Ertuğrul Gazi Secondary School
9	Fatih Secondary School
10	Genç Osman Secondary School
11	Hasan Ali Yücel Secondary School
12	Mareşal Fevzi Çakmak Secondary School
13	Mevlâna Secondary School
14	Mimar Sinan Secondary School

15	Namık Kemal Secondary School
16	Şehit Öğretmen Hamit Sütmen Secondary School
17	Türk Hava Kurumu Gazi Secondary School
18	Yıldırım Bayezid O Secondary School
19	Yunus Emre Secondary School

The data collection tool developed by the researcher to determine the level of acquisition of geographical skills in the Social Studies course by secondary school students was selected from the secondary schools in Sultanbeyli district by convenience sampling method in the spring semester of the 2022-2023 academic year and applied to 7th grade students studying in these secondary schools. Time, volunteerism, and economy were taken into consideration in choosing this method. The convenience sampling method brings economy and speed to the research (Yıldırım & Şimşek, 2018). The geographical skill level measurement tool was applied to a total of 352 students in 2 different secondary schools.

Data Collection Tool

The data used in the study were collected with the geographical skill level measurement tool developed by the researcher. At the beginning of the test, students' personal information about the gender of the student, the educational status of the mother and father, the income level of the family, the status of receiving pre-school education, the membership of environmental organizations, and the ownership of geographical materials were included. This section was created with the opinions of experts.

The steps of the test development process were followed in the development of the measurement tool (Güler, 2017). First, the purpose of the test was determined. Since this study aims to determine the level of students' acquisition of geographical skills, an achievement test was applied to see the result. To determine the scope, the outcomes in the 4th, 5th, 6th, and 7th grade SSC were examined, and the outcomes related to geography were determined. The identified geographical outcomes were matched with 8 geographical skills.

In the achievement test to be applied to the student after the acquisition and skill matching, the permanence and retention of the information learned by the student were taken into consideration. Therefore, out of 9 geographical skills, 4 geographical skills that are predominantly found in the 6th and 7th grades were identified and a specification table was prepared according to these 4 skills. For each geographical skill, questions were created according to the renewed Bloom's taxonomy steps. Questions were grouped according to skills and Bloom's taxonomy. The renewed Bloom's taxonomy was considered in question formation and a total of 40 questions were prepared for each geographical skill, 10 questions from each skill at the level of recall, comprehension, application, analysis and evaluation. No question was prepared from the creation stage. The reason for this is that the creation stage cannot be measured with multiple-choice question type. In the creation stage, students are expected to develop a new product, idea or thought based on the knowledge they have acquired (Anderson et al. 2021). Since the objectives of the creation stage, which is at the highest level, cannot be measured with multiple-choice question type, no question from the creation stage was created in this achievement test. The 40-question item pool was reduced to 20 questions after

receiving expert opinions and finalized. Whether the prepared test items were appropriate or sufficient for geographical skills and the renewed Bloom's taxonomy was examined by experts in terms of content validity and an opinion form was used for each item, which included the appropriate or inappropriate section. Organizing and selecting the test items by taking expert opinion increases the content validity of the test items. The pre-application test was administered to 100 7th grade students studying in a secondary school in Sultanbeyli without specifying their response times.

After the pilot application, item discrimination and difficulty values were determined for data analysis and Kuder Richardson-21 (KR-21) and Cronbach Alpha values were determined as the average item difficulty, item discrimination and reliability of the developed test. When the results of the analysis were evaluated, since the item discrimination index was not low in any item, the 20-item "Geographical skills achievement test" was completed. In the achievement test, average difficulty (p) was calculated as 0.692 and average discrimination (r) was calculated as 0.711. Based on the results of item analysis, it can be said that a high difficulty, high discrimination, and reliable achievement test was obtained. The KR-21 reliability coefficient was 0.792, while the Cronbach Alpha reliability coefficient was 0.739.

Data Collection and Analysis

The measurement tool, which was revised after the pre-application, was administered to a total of 352 students from the 7th grade students at the secondary schools in Sultanbeyli, which were determined through convenience sampling in the spring semester of the 2022-2023 academic year, between May 1 and May 12. During the application, the students were supervised by the course teachers and the researcher. As in the pre-application, motivating explanations were given to the students in the actual application. Students were seated in such a way that they would not be affected by each other's answers. The duration of the application was noted and, like the pre-application, the time for students to answer the measurement tool was determined as 33-35 minutes.

Depending on the ethics committee permission and the duration of the research permission obtained from the Ministry of National Education, the measurement tool was administered between May 1 and May 12. The choice of this date was influenced by the fact that the geography acquisitions in the Social Studies course were processed and completed. The research data were collected in the week after the schools where the measurement tool would be applied, according to the availability of the schools and teachers. The data set obtained after the geographical skill level measurement tool was applied to the seventh-grade secondary school students was analyzed in SPSS 25.0 statistical program. The data were analyzed by T-test, Levene's test, Shapiro-Wilk test, and ANOVA test.

A 20-question achievement test was applied to measure the geographical skills of secondary school students. Correct answers were given 1 point and incorrect answers were given 0 points. Students' scores ranged from 0 to 20.

Findings

Findings Related to the Level of Secondary School Students' Acquisition of Geographical Skills in Social Studies Course

Under this heading, the findings related to the distribution of the level of secondary school students' acquisition of geographical skills in the Social Studies course according to the pre-test and post-test results in the actual implementation are presented.

Table 2

The Level of Geographical Skills of Secondary School Students According to Their Pre-Test Scores

Group	N	X	ss
Pre-test	352	82.65	8.32

As shown in Table 4.1, the mean and standard deviation of the pre-test scores of the secondary school students were 82.65 and 8.32, respectively. Thus, skewness and kurtosis values and Shapiro-Wilk test results were examined.

Table 3

Normality Test Results of the Pretest Scores of Secondary School Students

Group		Shapiro-Wilk		Skewness	Kurtosis
	Sd	p			
Pre-test	352	.871		-.291	-.681

According to the table, the p value of the Shapiro-Wilk test for the pre-test scores of the secondary school students was found to be .871. As a result of the normality test, the skewness and kurtosis values of the pre-test scores are between -1.5 and 1.5. Shapiro-Wilk test results were higher than .05. Therefore, it was concluded that the pretest scores were normally distributed.

The homogeneous distribution of the pre-test scores of the secondary school students was examined with Levene's test. Levene's test is a method used to determine homogeneity (Büyüköztürk, 2020). The significance value used to determine the homogeneity of the scores to which Levene's test is applied must be higher than .05. A P value higher than .05 proves that the variances of the groups are equal or close to equal, and a smaller value proves the existence of a significant difference (Kilmen, 2021).

Table 4

Homogeneity Test Results of the Pretest Scores of Secondary School Students

Levene's Statistic	sd1	sd2	p
1.91	1	53	.361

Looking at the results of Levene's test in Table 4, it was determined that the pre-test scores showed a homogeneous distribution. It was determined that the pretest data were normally distributed, and their variances were homogeneous. The post-test was applied to secondary school students through the achievement test for measuring geographical skills. Descriptive statistics of the scores obtained from the post-test are given in Table 5.

Table 5

The Level of Geographical Skills of Secondary School Students According to Their Post-Test Scores from the "Geographical Skills Achievement Test"

Tests	Groups	N	x	S.S	U	Z	P
Post-Test	Pre-test		176	8.25	546		
					174.000	-3.287	0.006
Post-test			176	14.42	813		

*p<0.05

When Table 5 is examined, the average post-test score of the questions aimed at measuring geographical skills is 14.42; the average pre-test score is 8.25. Considering the mean scores of the participants from the post-test, the U value, which is the difference between the groups' achievement test analysis level mean scores, is 174.00 and the P value is 0.006. Therefore, it was determined that there was a significant difference between the pre-test and post-test achievement scores of secondary school students. After the pilot application, the pre-test and post-test were applied as the actual application (Table 6). When the results obtained from the achievement test were evaluated, no increase was detected in the pre-test average (XÖ=48.52, XS=48.39). There was an increase in the post-test mean (XÖ=44.7, XS=72.9). According to the results of the data analysis, when the post-tests of the groups were compared, it was concluded that the average was higher and statistically significant.

Table 6

Pre-Test and Post-Test Arithmetic Means

Test Group	**XÖ**	**XS**
Pre-test	48.52	48.39
Post-test	44,7	72,9

For this reason, Mann Whitney U test, one of the nonparametric statistical tests, was used to evaluate the differences between the achievements of the students. After the implementation, the Mann Whitney U test was used to examine whether there was a significant difference between the pre-test and post-test geographical skills achievement test. The results are given in Table 7 below.

Table 7

Pre-Test and Post-Test Scores

p	U	z	p
< .05	108.000	z = -.82	.0.30

When the values in Table 7 were analyzed, it was found that there was a statistically significant difference between the pre-test and post-test scores at p< .05 (U=108.000; z = -.82; p=.0.30).

Findings Related to the Analysis of Secondary School Students' Level of Acquisition of Geographical Skills in Social Studies Course According to Various Variables

Under this heading, the findings on whether the level of secondary school students' acquisition of geographical skills in the Social Studies course differs according to the following variables are given: Gender, Preschool education status, Family income level, Mother's education level, Father's education level, Membership status of a family member in an institution or organization related to the environment, Whether the student has tools and equipment related to geography such as atlases, maps, globes at home.

Findings Related to the Change in Secondary School Students' Level of Acquisition of Geographical Skills in Social Studies According to Gender

Table 8

Distribution of the Participants in Terms of Gender Variables

Gender of the student	N	%	t	p
Female	179	%51,2	2.92	0.64
Male	173	%48,8		

Table 8 shows that there are more female students than male students. The findings show that the number of female participants is 179 and their percentage in the distribution is 51.2%; the number of male participants is 173 and their percentage in the distribution is 48.8%. In line with the answers given to the achievement test, it was determined that there was no significant difference between the achievement test and the gender variable.

Findings Related to the Level of Secondary School Students' Acquisition of Geographical Skills in Social Studies Course with the Variable of Receiving Preschool Education

Table 9

Distribution of the Participants in Terms of the Variable of Preschool Education Status

Preschool education status	N	t	p	
Received pre-school education		276	3.50	0.00
No pre-school education	76			

Table 9 shows that 276 students received preschool education and 76 students did not receive preschool education. The findings prove that the level of acquisition of geographical skills is higher in students who received pre-school education. A significant difference was found in the responses of the participants who received preschool education to the achievement test (t=3.50; p=0.00).

Findings Related to the Level of Secondary School Students' Acquisition of Geographical Skills in Social Studies Course with the Variable of Family Income Level

Table 10

ANOVA Test Results of the Participants in Terms of Family Income Level Variable

Family income level	N	F	p
8.500 TL	191	2.81	0.18
8.500 TL-11.500 TL	96		
11.500 TL +	65		

Looking at Table 10, according to the results of the ANOVA test conducted according to the income level of the family of the participants participating in the study, it was found that the income level of 191 students was 8.500 TL, 96 students had an income level between 8.500-11.500 TL, and 65 students had an income level of 11.500 TL and above. However, it was determined that family income level did not cause a significant difference in the level of acquisition of geographical skills of secondary school students (F= 2.81; p= 0.18).

Findings Related to the Level of Secondary School Students' Acquisition of Geographical Skills in Social Studies Course in Terms of Mother's Education Level

Table 11

ANOVA Test Results of the Participants in Terms of the Mother's Education Level Variable

Education Level of the mother	N	F	p
Primary School	150	4.18	0.03
Secondary School	60		
High School	134		
University	8		

According to Table 11, when the results of the ANOVA test conducted according to the level of maternal education of the participants who participated in the study were analyzed, it was determined that the mothers of 150 students had primary school education, the mothers of 60 students had secondary school education, the mothers of 134 students had high school education, and the mothers of 8 students had university education. In addition, it was determined that there was a significant difference in the level of acquisition of geographical skills by mother's education level (F=4.18; p=0.03).

Findings Related to the Level of Secondary School Students' Acquisition of Geographical Skills in Social Studies Course with the Variable of Father's Education Level

Table 12

ANOVA Test Results of the Participants in Terms of the Father's Education Level Variable

Education Level of the father	N	F	p
Primary Scool	130	3.72	0.01
Secondary School	100		
High School	92		
University	30		

Looking at Table 12, when the results of the ANOVA test conducted according to the level of father's education level of the participants who participated in the study were analyzed, it was determined that the mother of 130 students had primary school education, the father of 100 students had secondary school education, the father of 92 students had high school education, and the father of 30 students had university education level. However, it was determined that there was a significant difference in the level of acquisition of geographical skills by the level of father's education (F=3.72; p=0.01).

Findings Related to the Level of Secondary School Students' Acquisition of Geographical Skills in Social Studies Course with the Variable of Family Membership in an Institution or Organization Related to the Environment

Table 13

Distribution of the Participants in Terms of Membership in Environmental Organizations

Membership of institutions related to the environment	N	t	p
Membership	68	2.96	0.00
Not a member	284		

According to Table 13, when the results of the analysis according to the variable of whether a family member is a member of an institution or organization related to the environment are examined, it is determined that 68 students are members of institutions and organizations related to the environment, while 284 students are not members of an institution or organization related to the environment. In addition, it was determined that having a family member as a member of an institution and organization related to the environment created a significant difference on the level of acquiring geographical skills (t=2.96; p=0.00).

Findings Related to the Level of Secondary School Students' Acquisition of Geographical Skills in Social Studies Course with the Variable of Having Geography-Related Tools and Equipment such as Atlas, Map, Sphere in the Student's Home

Table 14

Distribution of the Participants in Terms of the Variable of Having Materials at Home

Availability of materials at the student's home	N	t	p
Material available	284	3.52	0.00
No material available	68		

When Table 14 is examined according to the variable of whether the participants' level of acquiring geographical skills in the Social Studies course is analyzed according to whether the student has tools and materials related to geography such as atlases, maps, globes at home, it was concluded that 284 students used materials and 68 students did not use materials. However, when the effect of the level of using materials on the level of acquiring geographical skills was examined, it was found that there was a significant difference (t=3.52; p=0.00).

Conclusion and Discussion

According to the results of this study, which aims to reveal the level of secondary school students' acquisition of geographical skills in the Social Studies course, the level of secondary school students' acquisition of geographical skills was determined as 44.7. According to this statistical data, it can be said that the level of students' acquisition of geographical skills is low. Although the studies about this research are not very wide, in the research conducted by Erol (2014), it was seen that the geography literacy level of the students was not at a sufficient level. It was determined that the level of students' acquisition of geographical skills in the Social Studies course differed according to various variables such as pre-school education, education level of parents, income level of the family, whether the family is a member of an institution or organization related to the environment, and whether the student has a geography-related material at home.

The reasons why secondary school students have difficulty in acquiring geographical skills vary. The abstract nature of geographical topics in the Social Studies course makes learning difficult. Gümüş and Avcı (2016) examined the level of understanding of geographical concepts in the sixth grade Social Studies course and stated that students understood daily concepts better but could not understand abstract concepts. Memişoğlu and Tarhan (2016) stated that some topics in the Social Studies course are not suitable for the level of students. Similarly, there are some studies indicating that the content of the Social Studies course is high, and the duration of the course is short, and therefore student achievement is low (Gümüş & Avcı, 2016; Özdoğan, 2019). According to Erol (2014), class size, whether the student lives in rural or urban areas, and the use of media resources are also effective on the level of geographical success.

In this study, when the geographical achievement level of secondary school students was analyzed according to gender variable, no significant difference was found between gender and achievement level. In some similar studies, it was concluded that the effect of being a girl

or a boy on academic achievement did not show a significant difference (Erol, 2014; Oruç & Akgün, 2010; Pala & Başıbüyük, 2020).

There is a positive relationship between the educational level of the father and the achievement level of the student. As the father's education level increases, the student's achievement level also increases. The father's participation in the education process increases the academic achievement of the student. Providing different educational opportunities, interest and support to the student is effective in the formation of this result. Similarly, in the studies conducted by Erol (2014) and Pala and Başıbüyük (2020), it was concluded that a high level of father's education positively affects the success of the student.

It is extremely important to utilize visual materials such as atlases, globes, and maps to increase student success (Özdoğan, 2019). The use of visual materials suitable for the lesson increases the academic success of the student. According to the results of this study, it was seen that whether the student has a geographical material at home is effective on student achievement. Students who have materials such as atlases, globes, etc. related to geography have a higher level of achievement in geographical skills. According to Ulusoy and Gülüm (2009), learning by seeing is an effective method. Teachers' use of materials such as models, globes, and smart boards in the lesson increases students' attention and provides a better understanding of geography subjects (Değirmenci, 2019). According to teachers, some materials used in geography lessons increase geographical success (Akınoğlu & Bakır, 2003; Özdoğan, 2019).

Another factor affecting students' academic achievement is their pre-school education. Preschool education socializes students and enables them to acquire skills such as discovery, problem solving and decision making. Preschool education increases readiness for primary education and success in students' future academic life, regardless of rural or urban areas (Uyanık & Kandır, 2010; Micozkadıoğlu & Kazak Berument, 2011). It has also been observed that preschool education reduces the achievement gap between boys and girls. Parents also state that pre-school education will increase the student's academic development in the future. The results of this study also show that the level of acquisition of geographical skills of students who receive preschool education is higher than students who do not receive preschool education. According to the data of the Organization for Economic Cooperation and Development (OECD), among the students who participated in the Programme for International Student Assessment (PISA) exam in Turkey, those who received preschool education scored higher than those who did not receive preschool education (OECD, 2016).

Geography education is based on environmental education. The close environmental education given to students and the principle of lifelong learning increase student success (Bacakoğlu, 2017; Teyfur, 2008). Küçük and Yıldırım (2021), who examined the effect of environmental education on academic achievement, concluded that the use of materials related to the environment outside of school positively affects education. Gaining first-hand experience in environmental education and students being active in the process are important for sustainable education (Artun & Özsevgeç, 2015). Considering that education starts in the family, the environmental awareness of the family will ensure that the child is more conscious about the environment. In this study, the relationship between the family's membership in any institution or organization related to the environment and student achievement was examined. The fact that the family is a member of any environmental institution or

organization positively affects student achievement. It can be said that being a member of an environmental institution or organization is closely related to the educational level of the family. The fact that families with a high level of education have environmental awareness also increases their membership in environmental organizations. In the study conducted by Teyfur (2008), a positive relationship was observed between the attitudes of primary school students with high academic achievement towards the environment.

Another result of the study is that there is no significant difference between the level of secondary school students' acquisition of geographical skills in the Social Studies course and the income level of the family. Looking at the literature, it is also known that there is a positive relationship between family income level and student achievement (Aslanargun, Bozkurt, & Sarıoğlu, 2016; Kılıç & Haşıloğlu, 2017; Böyük, Tanık, & Saraçoğlu, 2011). In a study conducted by Cingöz and Gür (2020), the effects of economic, cultural, and social characteristics on TEOG scores were examined. According to the results of the study, there was a strong relationship between economic status and TEOG scores. Students with better economic status have higher TEOG scores. It was suggested that education should be offered to all socio-cultural levels by providing equality of opportunity and opportunity. Socioeconomic and cultural characteristics were also found to have an impact on PISA achievement (Yolsal, 2016).

Recommendations

Recommendations for Teachers

- Easier understanding of geographical skills is related to students having geographical materials such as atlases, globes, and maps at home. Therefore, the use of these materials can be increased during the lesson for better comprehension of geographical skills in the Social Studies course.
- For students to make better sense of geographical skills, environmental education can be provided through so-life experiences.

Suggestions for Families

- Since there is a close relationship between the educational attainment of parents and student achievement, increasing the level of education of parents can increase the level of geographical skills acquired by students. Therefore, cooperation should be established with the family.
- The development of environmental awareness of the parents positively affects the student's academic achievement and attitude towards the environment. Therefore, it is extremely important to instill environmental awareness in students by taking role models in the family.
- It should not be forgotten that pre-school education is the basic step of academic success, based on the conclusion that students who receive pre-school education have a better grasp of geographical skills. It should be ensured that every student receives pre-school education.

Suggestions for Researchers

- A more comprehensive field study can be conducted by developing new test items that measure the geographical skills of secondary school students in the Social Studies course.

- This research was conducted with 7th grade students. The level of acquisition of geographical skills by students in each grade level can be examined.
- The level of acquisition of each geographical skill in the Social Studies course can be examined and analyzed.
- The level of acquisition of geographical skills in my Social Studies course can be measured by using open-ended questions.
- Students' level of acquisition of geographical skills can be analyzed in terms of different variables.

Recommendations for the Central Organization

- For secondary school students to better comprehend geographical skills, gains in geographical skills can be increased in preschool curricula.
- In the early period, students learn geographical skills better. Therefore, activities for gaining geographical skills should be increased in preschool education.
- Activities can be carried out so that secondary school students can access tools and materials related to geography more easily.
- Geographical skills can be given together with course outcomes in the Social Studies curriculum.
- Explanations of geographical skills can be included in the Social Studies curriculum.
- Family seminars about geography education can be organized to help families gain geographical awareness.

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Conflict of Interest

The researchers do not have any personal conflicts with other individuals and institutions related to the research.

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